National Aeronautics and Space Administration

NASA Glenn
Strategic Action Plan Overview

2008

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Index

Director's Intent

NASA's mission is to pioneer the future in space exploration, scientific discovery, and aeronautics research. NASA enables the Nation to be the world's leader in these areas. Toward that end, we at Glenn Research Center (GRC) develop critical space flight systems and technologies to advance the exploration of our solar system and beyond while maintaining leadership in aeronautics.

Today, NASA GRC is responsible for a wide range of specific projects that will engage us for at least the next decade. For example, in support of the Exploration Systems Mission Directorate's Constellation Program, we will effectively develop the Orion Service Module and modify the Space Power Facility for future testing. Design, construction, and delivery of the Ares I Upper Stage Simulator will be safely and successfully completed. We will deliver the Traveling Wave Tube Assembly for the Advanced Capabilities Program's Lunar Reconnaissance Orbiter. To enhance the Aeronautics Research Mission Directorate's leadership in aeronautics, we will continue to develop advanced tools and technologies for the next generation of aircraft engines. Our support for the Science Mission Directorate will continue in areas such as completing the integration testing of the NASA Evolutionary Xenon Thruster (NEXT) ion propulsion system.

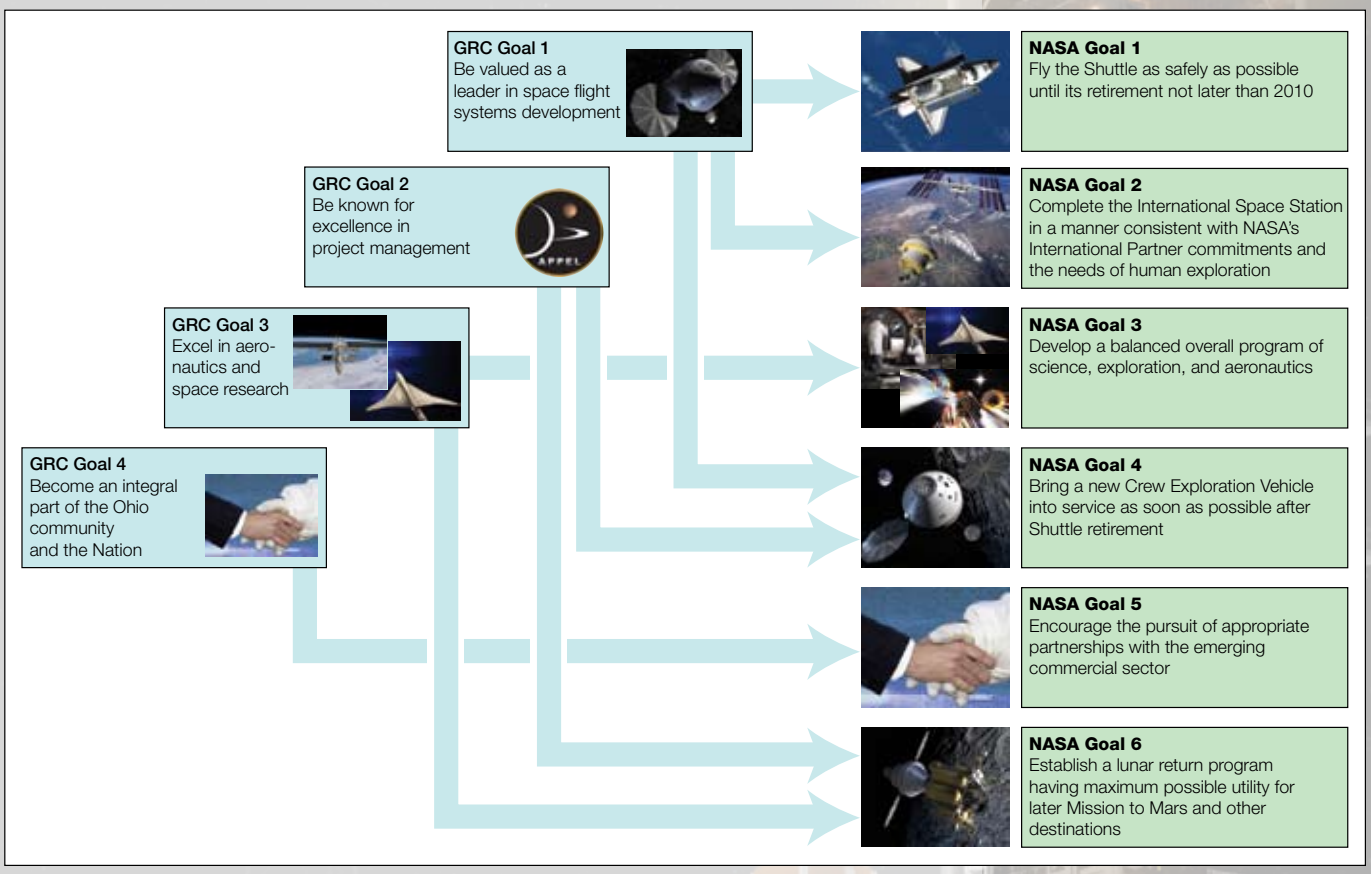
While meeting these current commitments is our highest priority, we will also focus on achieving the Center's four strategic goals:

1. *Be valued as a leader in space flight systems development*
2. *Be known for excellence in project management*
3. *Excel in aeronautics and space research*
4. *Become an integral part of the Ohio community and the Nation*

This document lays the foundation to safely, effectively, and efficiently achieve these goals. To do so requires GRC to sustain a complement of highly qualified people and vital supporting institutional capabilities, while leveraging and integrating contributions from the educational and business communities of Ohio, the six-state region (Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin), and the Nation.

Implementation

In order to meet the Director's intent, GRC will accomplish the goals and objectives described in this plan. The four GRC goals directly align with, and support, the implementation of the six NASA goals.



The objectives and actions associated with these GRC goals are measurable. It will be clear when GRC has met its milestones for Orion, Ares I, Ares V, and the Lunar Surface Access Module (Altair). It will be clear when we have retained and expanded our human space flight, science, and aeronautics roles. Similarly, we will know through customer feedback and increased leadership assignments when our project managers, engineers, and researchers are being recognized for excellence. Finally, we can determine how well we are integrated into the neighboring communities, the state of Ohio, the six-state region, and the Nation through a variety of measures, such as increased commercial investments and economic activity.

Goal 1: Be Valued as a Leader in Space Flight Systems Development

We will continue to excel in space flight systems development with the entire Center embracing a shared development vision to perform as a winning team. The Center will focus on completing milestones and using its highly skilled workforce to deliver on commitments. Our space flight team exhibits three critical and valuable attributes: (1) a "can do" attitude that matches objectives and risks, (2) a sense of urgency that values the simplest solution consistent with the facts, and (3) open communication that fosters a comfortable environment that actively invites contrary points of view to improve the process and outcomes of space flight development.

Objective 1.1: Prepare for Our Future Lunar Space Flight Projects

Glenn Research Center is preparing for new major leadership responsibilities associated with the Lunar Lander (Altair) and Lunar Surface Systems. These development and test activities are in the pre-project phase. We will help shape the concept of operations for each project's technological requirements, align our workforce and facilities, and be fully prepared to lead these activities.

Objective 1.2: Be "At the Table" From Conception Through Completion of Exploration Projects (In Our Areas of Expertise)

Glenn Research Center will assure that our space flight development personnel are sought out for their expertise in a variety of forums throughout the project development cycle. Early in formulation, our space flight development personnel will provide vision and broad architectural input leading to important development roles. At milestone reviews, they will provide independent assessments to ensure the ultimate success of the product.

Objective 1.3: Obtain Additional Leadership and Major Support Roles in Our Areas of Primary Expertise

Glenn Research Center will focus on programs and projects that align with the mission of the Agency and capitalize on the strengths of the current workforce, facilities, and partnerships. The Center will build on successes with current and past space flight systems development projects and pursue increasingly advanced work across all Mission Directorates as our experience level and capabilities grow, consistent with the vision and goals identified within this plan.

Today we are leading the development of major human space flight hardware and systems to an extent not seen at GRC in many years. The long-term future of the Center depends vitally on our ability to meet these projects' critical milestones within budget and on schedule. Our successful performance on today's space flight assignments best positions us for more work in the future. As such, we remain steadfast in our commitment to these assignments, and to a new rigor and discipline in the performance of our duties.

Goal 2: Be Known for Excellence in Project Management

We will continue to excel in high-profile project management responsibilities that will translate into visibility and awareness of our project management prowess. To achieve this goal, we will refine project management processes and strengthen our project management training and development program. In addition, we will use project manager presentations, forums, workshops, and symposia to showcase the Center's work.

Objective 2.1: Develop a GRC Project Management System

Develop processes that define project requirements for planning, formulation, and implementation to fully comply with the NASA Policy Requirement (NPR) 7120 series.

Objective 2.2: Develop the GRC Earned Value Management Process

Develop a GRC earned value management process that integrates technical performance, cost, and schedule with risk management to allow for objective assessment and quantification of project performance.

Objective 2.3: Achieve External Recognition of GRC Project Management Expertise

Glenn Research Center's use of project manager presentations, forums, workshops, and symposia to showcase the Center's work will provide added visibility and enable GRC to be recognized externally for its excellence.

Objective 2.4: Develop and Implement a GRC Human Capital Project Management Strategy

Glenn Research Center will develop and implement human capital management initiatives to ensure the correct skill mix and the right balance of civil servants and contractors.

Academy of Program/Project and Engineering Leadership

Goal 3: Excel in Aeronautics and Space Research

Glenn Research Center will continue to excel in aeronautics and space research by conducting cutting-edge innovative research as only NASA can. Rigorous peer review and independent evaluation processes will be exercised to ensure quality control and alignment with Agency and national needs. Open technical debate will be promoted to pursue technical excellence. We will use our highly qualified staff and facilities to advance the state of the art, to lead breakthroughs, and to enable the success of NASA's missions in aeronautics research, scientific discovery, and space exploration.

Objective 3.1: Expand on GRC's Leadership Roles in Aeronautics and Space Research

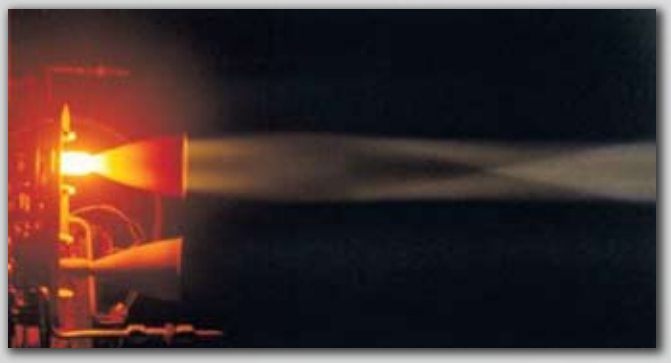
We will continually pursue opportunities to expand our research roles and activities to meet the needs of NASA and the Nation. This includes reviewing current Agency roles for aeronautics and space projects such as Principal Investigator (PI) and Project Scientist (PS), and identifying where GRC's expertise can best fill these positions to the benefit of the Agency. We will develop succession plans at a two-person depth for each critical position. We will develop an employee package that includes curriculum vitae, and seek opportunities to give GRC employees visibility and participation in aeronautics and space research activities. An important element of this objective will be keeping management and employees aware of upcoming opportunities, and developing a proactive capture strategy for new research opportunities.

Objective 3.2: Develop a Strategic Research Prioritization Plan

We will develop a Strategic Research Prioritization Plan to guide application of GRC civil service and contractor workforce, facilities, and budgets to meet the research needs of NASA. A Center-wide team will be chartered to develop this plan and present it to the GRC Research Review Council and GRC Strategic Management Council. The plan will be used to evaluate and redistribute the resources needed in accordance with the budget cycle. The results and content of the plan will be regularly updated based on assessments from independent peer reviews.

Objective 3.3: Promote Collaborative Research With Academia, Industry, and Other Government Agencies

We will pursue strategically relevant opportunities for collaboration with academia, industry, and other Government agencies. This will focus on reimbursable activities that are consistent with NASA mission and that maintain and advance GRC's technologies and research facilities required for future Agency needs. Such collaborations will provide a method of sustaining key disciplines that may not be a near-term priority for current programs. Building on these partnerships, GRC personnel will participate on multidisciplinary and multiorganizational teams to serve as subject matter experts and to remain current on technology status.



Objective 3.4: Successfully Demonstrate Space Technology Through Prototype Demonstration

The ultimate goal of technology research and development is the infusion of new technologies into flight and mission applications. We will use this as a key measure of success. For space research in particular, we will focus our activities to enable demonstration of prototype systems in relevant space environments. Research that leads to accomplishment of this objective and provides a substantial savings and performance advantage to future NASA missions will be a high priority.

Goal 4: Become an Integral Part of the Ohio Community and the Nation

We will continue to offer our talent and capabilities to benefit the Ohio community and the Nation as we accomplish the NASA mission. At the same time, we will seek out and engage constituencies throughout the country that provide invaluable support to NASA. The Center, as an entity, must be a good citizen that delivers on commitments to the Nation and provides benefits to the taxpayer. This will be accomplished through partnerships, economic development, and outreach efforts. The results of these efforts will be greater appreciation and support for GRC, an expanding economy, and a stronger community.

Objective 4.1: Leverage Center Resources by Establishing Key Partnerships

Glenn Research Center will focus and prioritize its use of partnerships to accomplish strategic objectives through effective interaction with universities, the business community, and state, local, and other Federal agencies.

Objective 4.2: Develop and Implement a Center Strategic Communications Plan

The Center will develop and implement a strategic communications plan to communicate its work to the rest of NASA, public officials, business partners, and the public to convey the impact GRC makes to industry and the NASA mission.

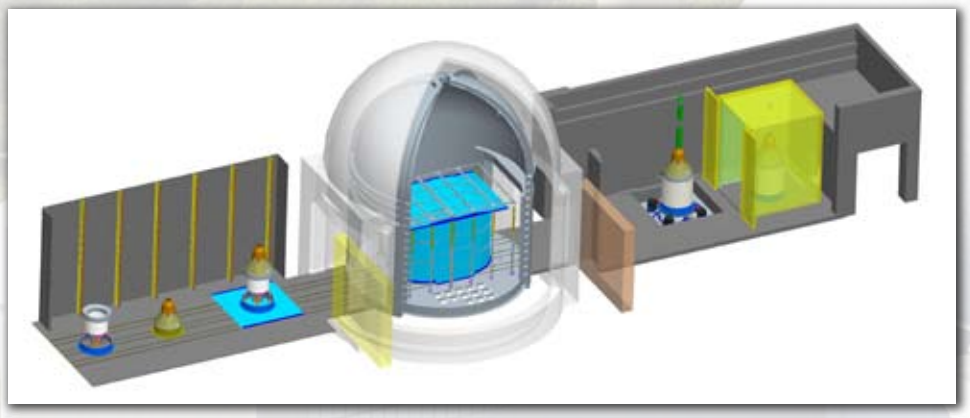
Objective 4.3: Increase Center Visibility Locally and Nationally

Coordinating the results of objectives 4.1 and 4.2, GRC will use key focus areas, relevant partnerships, and appropriate products and services to increase the relevance of NASA GRC at the local and national levels.

GRC Supporting Capabilities

The Center's strategic goals and objectives can only be efficiently achieved if we maintain and improve our workforce and infrastructure. A diverse and talented workforce of civil servants and support service contractors today provides the necessary array of services associated with safety, security, engineering, business and acquisition, budget and human resource management, accounting, cost estimating, economic analysis, information technology, strategic management, and unique aeronautics and space facilities. Each of these capabilities plays a vital role, yet—like the Agency as a whole—each faces significant budgetary challenges.

Near- and mid-term investments in supporting capabilities are guided by our 5-year budget and program assignments and are designed to assure that we will maintain and strengthen the highest priority capabilities needed to meet NASA's aeronautics and space program requirements. Long-term investments that develop and sustain Lewis Field and Plum Brook Station are guided by our Center Master Plan. These investments are identified through the annual planning, programming, budgeting, and execution process. Center planning and execution are monitored and managed by five senior management governance councils: Strategic, Operations, Program, Research, and Engineering.



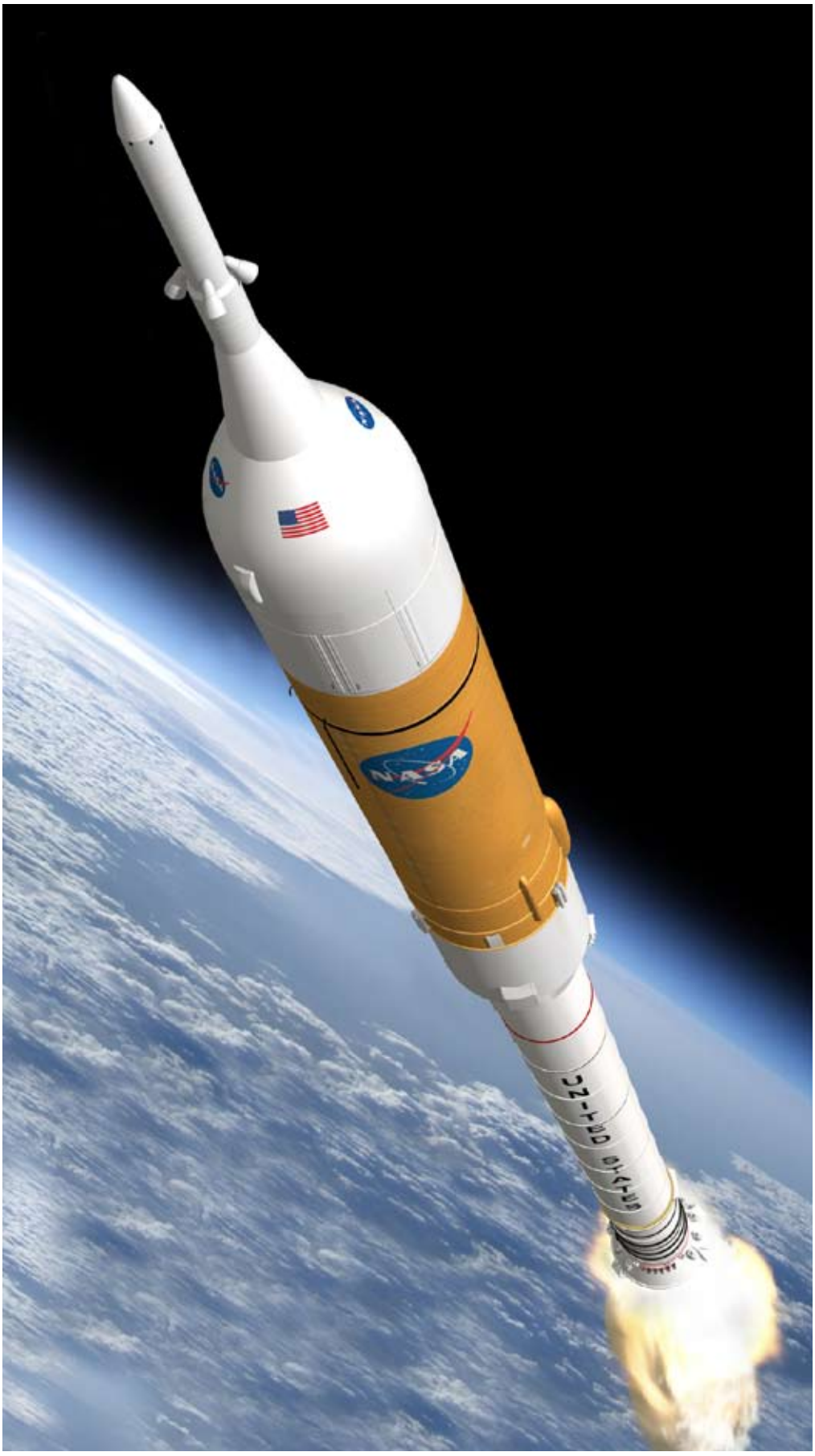
Closing Remarks

The success of the Agency and the future vitality of the Center depend on our achievement of these goals and objectives. This Overview thus will be supplemented by Strategic Action Plans from each Center Directorate, which as a whole will constitute the Center's Strategic Action Plan. The Center's leadership is committed to these Strategic Action Plans and will monitor status of their goals, objectives, and actions on a monthly basis. We are also committed to providing performance information on our progress in achieving these objectives and actions to Center staff, NASA Headquarters, and other Center stakeholders at least annually.

To assure accountability, each action described in each Directorate Strategic Action Plan will be assigned to a senior GRC manager and included in his or her individual performance plan. Each manager will be evaluated based upon the demonstrable performance of meeting these Center objectives. As appropriate, we will also require that GRC employees have relevant aspects of those actions incorporated in their individual performance plans.

Center leadership will formally review all Directorate Strategic Action Plans and this Overview every 6 months and will update them as needed. We will continue, as we did in the development of this Overview, to involve a broad representation of Center staff in each review and update. We will communicate all Overview updates externally as well as internally.

In closing, we note that the Center currently has a larger, more diversified and forward-looking portfolio than it has had in many years. It represents a future that is both challenging and clear. Each of us must now fully commit to meet our responsibilities in that portfolio assigned to GRC by the Agency and the Nation.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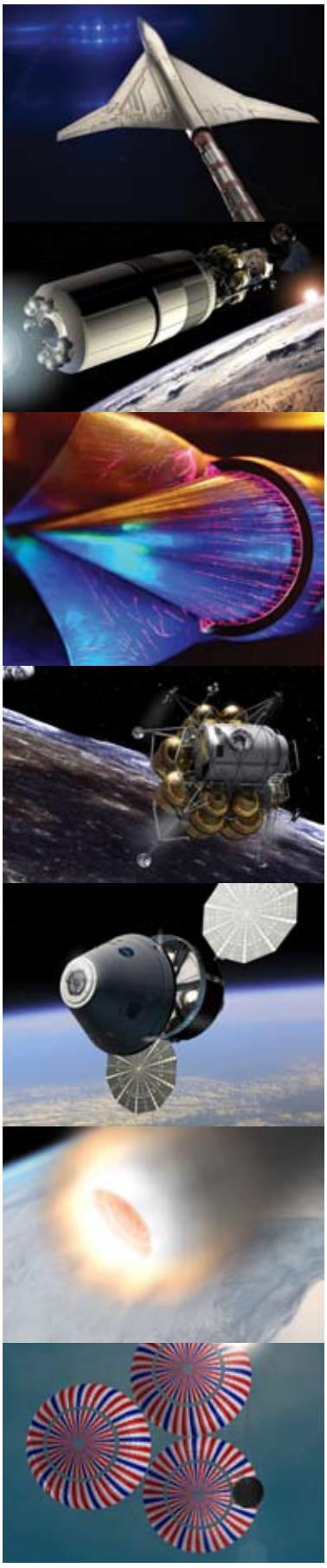

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